

Fig. 1

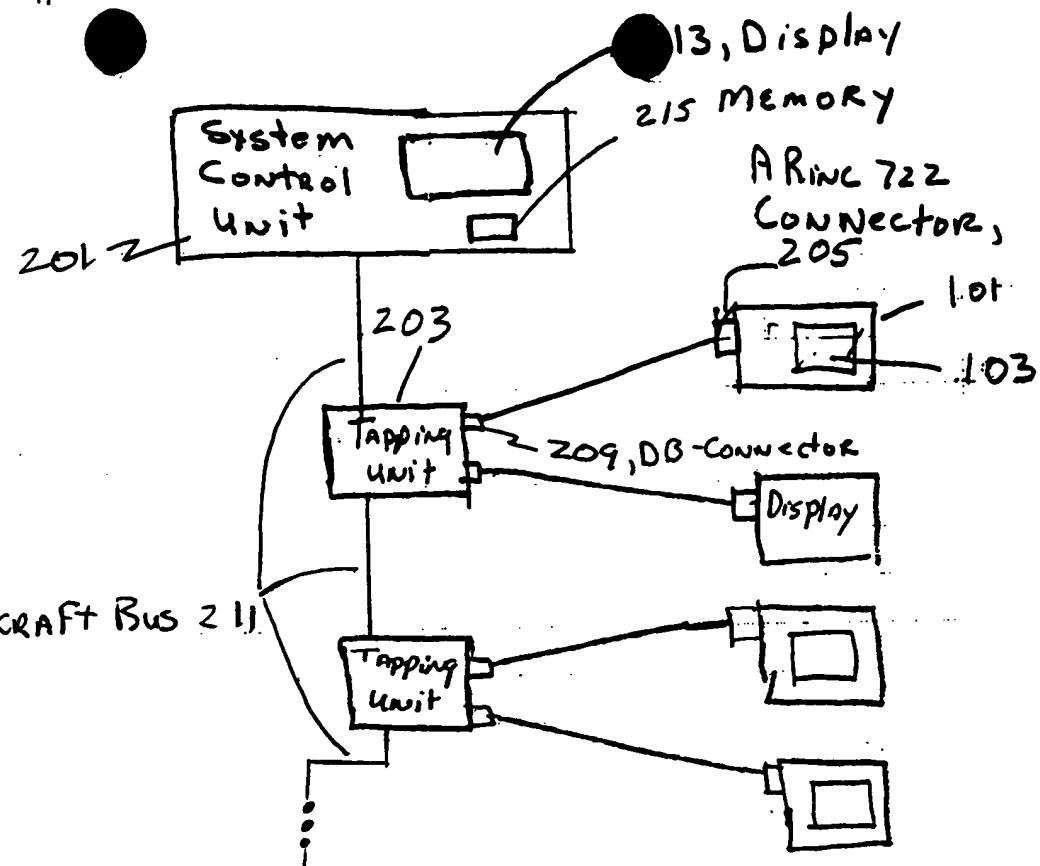


Fig 2A

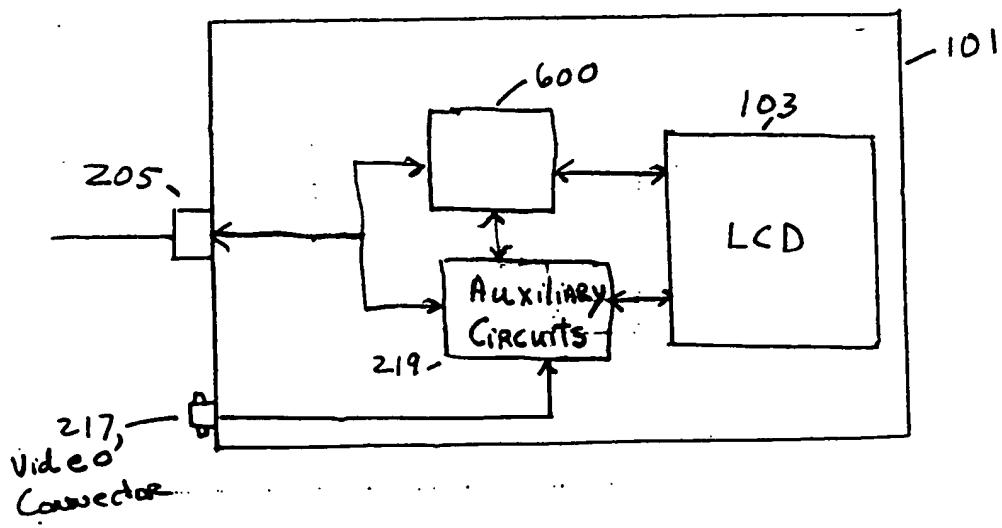


Fig 2B

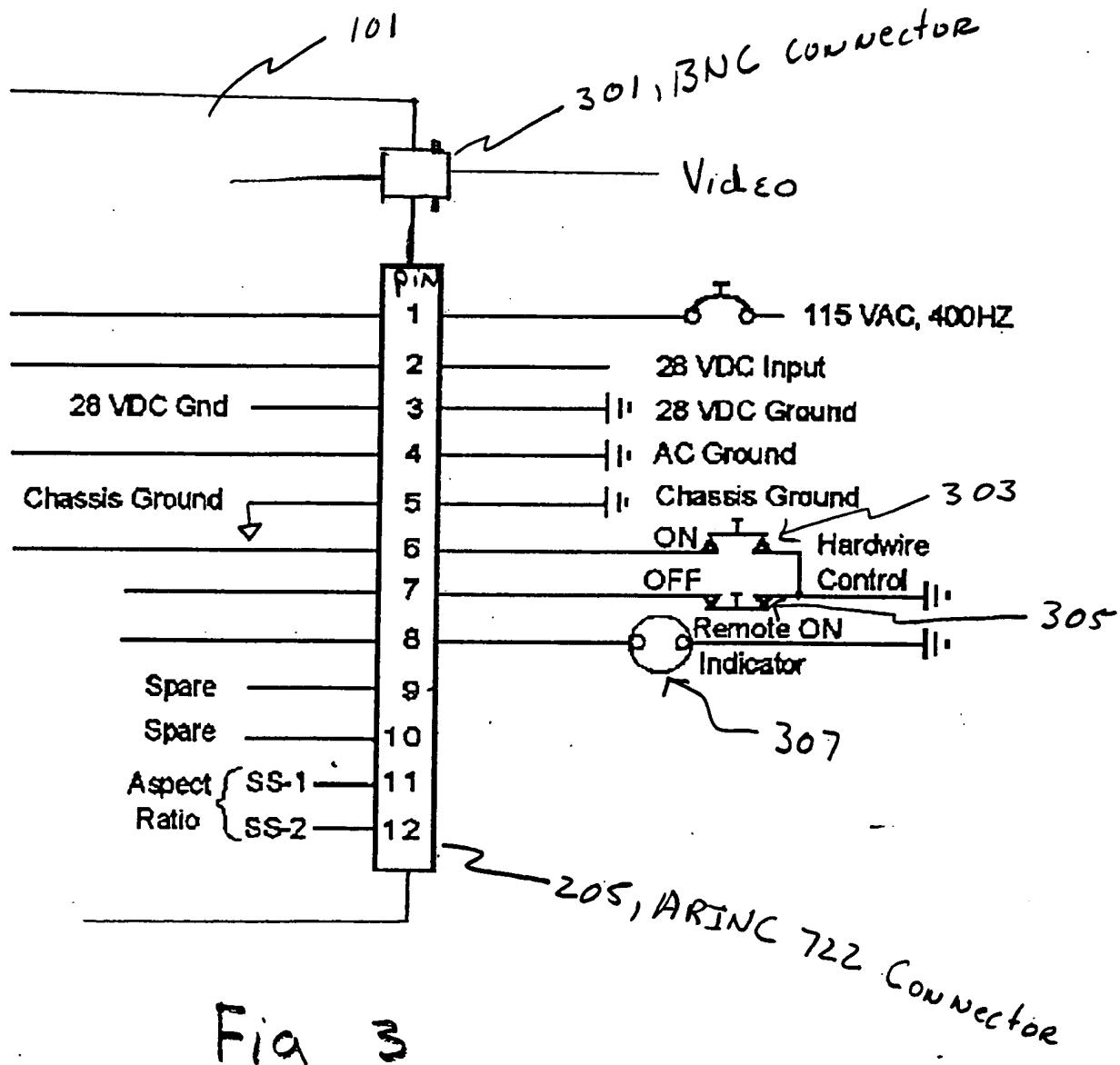


Fig 3

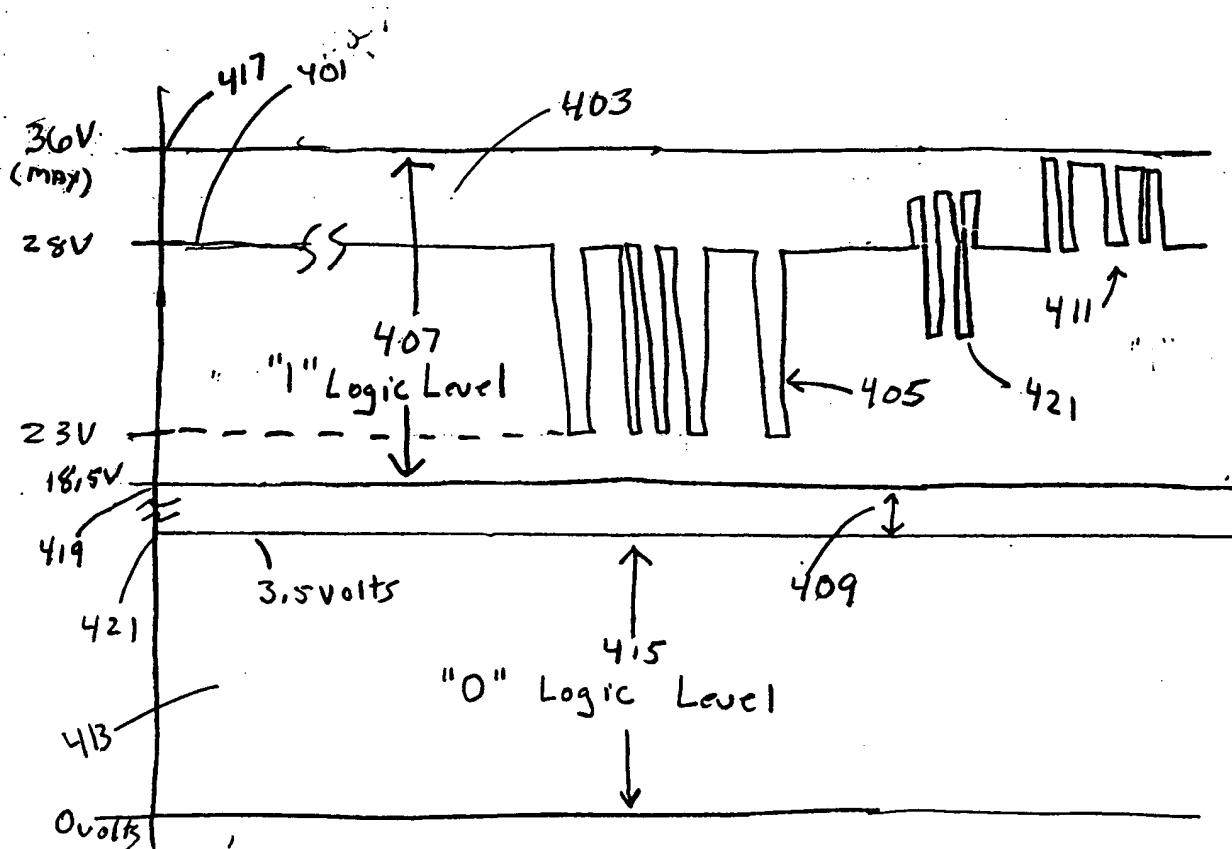


Fig 4

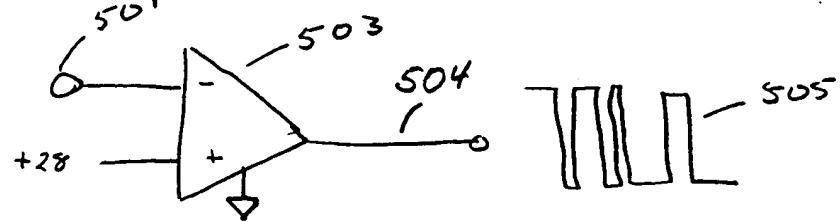


Fig 5 n

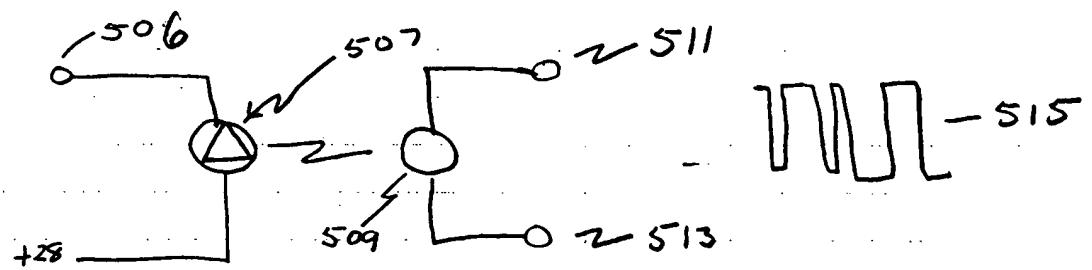


Fig. 5 B

Type of Information	Nominal Data Size	Format
Type of unit (677)	4 BCD characters	Last 2 digits of base number, plus last 2 digits of dash number.
Serial Number (679)	4 BCD characters	Last 4 digits of unit serial number as given on the bar code label.
BIT Discretes (623,625,627)	24 BITS +	Individual discretes formatted into 3 eight-bit words.
Operating Time (683)	6 BCD characters	Represents up to 99,999.9 hours.
Operating Cycles (685)	5 BCD characters	Represents up to 99,999 cycles. A cycle is 1 deploy stow cycle.
Hardware version (681)	2 BCD characters	Represents up to 99 versions.
MOD (681)	2 BCD characters	Represents up to 99 Modifications.
Software version (681)	2 BCD characters	Represents up to 99 versions.
Cage Code (679)	5 BCD characters	Commercial and government entity code.

Fig. 6

Bit Discrete	Type	Function
Flash alert	Type 2	The motor controller board has detected a prior occurrence of a failure and has logged the event in flash memory. This is meant to alert maintenance personnel that a fault has occurred even though the unit appears to be operating normally. The BIT data stream is sent with this discrete bit reset to show there has been a prior fault condition. This is meant to be used to indicate that the unit is operating but probably needs service.
AC good fail	Type 2	The power supply has reported the AC power input is not good (usually a power loss). It is meant to inform the Tapping Unit why the display unit is shutting off.
DC good fail	Type 1	The power supply has reported the DC power outputs are not good (usually out of spec). This discrete is meant to inform the Tapping Unit why the display unit is shutting off, and it also provides an alert that the display unit needs service.
Motor fail	Type 1	The motor controller/motor has failed to deploy or stow the monitor. This is meant to alert the flight attendants to check the unit to see if it needs to be manually stowed, or for the flight attendants to instruct the passengers to view a different monitor rather than the failed unit. This also provides an alert that the display unit needs service.
Video CCA fail	Type 1	The video converter board has failed, primarily when it fails POST. This provides an alert that the display unit needs service.
Backlight fail	Type 2	Current drawn by Inverter module is lower than expected, which indicates one backlight has failed, or the portion of the inverter used to drive the backlight is not working. If one backlight has failed, the display unit continues to operate with a reduced brightness display rather than shut itself down. The status stream is sent with the backlight fail BIT discrete reset to indicate the fault condition. This provides an alert that the display unit needs service.
(Reserved 1)	TBD	An extra discrete bit reserved for future use.
Inverter Fail	Type	Current drawn by Inverter module is much lower than expected, which indicates both backlights have failed, or the inverter is not working. In the current embodiment, the Inverter fail signal is considered an equipment failure only during a power-on self test. If the inverter has a fault, the display unit continues to operate with a blanked screen rather than shutting itself down. The status stream is sent with the Inverter fail BIT discrete reset to indicate the fault condition. This provides an alert that the display unit needs service.
Capacitor low	Type 1	The charge is too low in the capacitor bank that is used for reserve power during the stow process when a power loss occurs, indicating that at least one of the capacitors has failed in an open circuit state. Since this power is needed to guarantee stowing the unit during a power failure, the unit does not attempt to deploy if it detects a Capacitor low fault. Instead, the BIT data stream is sent with this discrete bit set to show the fault condition and then the unit turns itself off, indicating that the unit needs service.
Loss of video fail	Type 2	The video converter board has not seen a video signal for 10 minutes. This does not mean that the display unit needs service; rather, it is meant to inform the Tapping Unit why the 10.4" Retract is shutting off
Deploy fail	Type 2	The motor controller/motor has completed the entire 3-try routine and has given up trying to deploy. This is meant to alert the flight attendants to check to see if there is an obstruction in the way of the monitor that needs to be moved. This does not mean that the display unit needs service; rather, it is meant to inform the Tapping Unit why the display unit is shutting off.
Thermal limit	Type 1	The power supply has reported that the sensor temperature has exceeded +85 degrees C, and the 10.4" and the display unit shutting down rather than failing due to overheating, and thus avoiding a safety incident report against the unit. This provides an alert that the display unit needs service.
Thermal stress	Type 2	The power supply has reported that the sensor temperature has exceeded +60 degrees C. The 10.4" Retract continues to operate rather than shut itself down, but the BIT data stream is sent with this discrete bit set to show the fault condition. The unit is operating but is hotter than normal, indicating that the unit probably needs service.
(Reserved 3)		An extra discrete bit reserved for future use.
(Reserved 4)		An extra discrete bit reserved for future use.
(Reserved 5)		An extra discrete bit reserved for future use.

Figure 7

